NEAL LANE BRIDGE
Spanning South Myrtle Creek, Neal Lane (CR 124)
Myrtle Creek
Douglas County
Oregon

HAER OR-126
OR-126

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

NEAL LANE BRIDGE[1]
HAER No. OR-126

Location:	Neal Lane (County Road 124) spanning South Myrtle Creek, Myrtle Creek, Douglas County, Oregon UTM: 10.477610E.4762733N, Myrtle Creek, Oregon, Quad.
World Guide #:	37-10-07
Structural Type:	Kingpost through truss covered bridge
Date of Construction:	1939
Designer:	Oregon State Highway Commission
Builder:	Douglas County Engineering Department
Owner:	Douglas County, Oregon
Previous Use:	Vehicular bridge
Present Use:	Vehicular bridge
Significance:	Neal Lane Bridge is the most intact of Oregon's 45 surviving covered bridges and the only kingpost truss covered bridge in the state.
Historian:	Researched and written by Lola Bennett, September 2003
Project Information:	The National Covered Bridges Recording Project is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. HAER is administered by the Historic American Buildings Survey/Historic American Engineering Record, a division of the National Park Service, U.S. Department of the Interior. The Federal Highway Administration funded the project.

[1] The road and bridge derive their name from the F.W. Neal family who owned property adjacent to the bridge in the 1930s.

Chronology

1805 America's first covered bridge built at Philadelphia

1843 The "great migration" begins; 1,000 pioneers travel the Oregon Trail

1849 Oregon Provisional Government enables county governments to build bridges

1851 Oregon's first covered bridge built at Oregon City

1852 Douglas County established

1854 Lazarus Wright erects a grist mill near this site

1859 Oregon becomes the 33rd state admitted to the Union

1865 John Hall plats the Town of Myrtle Creek

1870s Primitive road on alignment of present-day Neal Lane existed by this date

1882 Oregon & California Railroad comes to Myrtle Creek

1888 Douglas County Engineer Floyd C. Frear born

1903 Myrtle Creek incorporated

1921 Neal Lane laid out as a county road

1936 Oregon has 300 covered bridges

1939 Neal Lane Bridge constructed by Douglas County road crews

1954 Oregon has 149 covered bridges

1960 Gallon House Bridge repaired

1963 Douglas County Engineer Floyd C. Frear dies

1977 Oregon has 56 covered bridges

1978 Covered Bridge Society of Oregon organized

2003 Neal Lane Bridge recorded by the Historic American Engineering Record

Introduction

Oregon's first documented covered bridge was built at Salem in 1862.[2] In a region of plentiful virgin timber, wooden bridges were a practical, economical solution to crossing rivers, and during the next three decades, hundreds of covered bridges were built. Floods, however, were an ongoing threat. When large numbers of covered bridges were destroyed by floods in the 1880s and 90s, it encouraged the growing trend toward metal bridges. The late nineteenth and early twentieth centuries saw an enormous reduction in Oregon's covered bridge population. Ironically, just as the horse-and-buggy era came to a close, and signs of "progress" were everywhere, a new era of covered bridge building began to unfold.

In 1913 the Oregon State Highway Department was created and charged with establishing and maintaining a system of roads and bridges throughout the state, including those financed by the counties. Among the Department's first tasks were publishing a manual of bridge specifications and making bridge design services available to county engineering departments. State engineers initially favored concrete and steel bridges, but eventually drew up standardized plans for timber trusses, under pressure from the counties. This benefited the local lumber industry and proved to be a sound economic measure during the steel shortages of the world wars.

Some covered bridges were built on state highways between 1918 and 1925, but the majority were built on county roads in the 1920s, 30s and 40s. In 1954, Benton County's Irish Bend Bridge became the last covered bridge in the United States built for purely economic reasons, and Oregon's second covered bridge era came to a close. From a peak of about 300 covered bridges in 1938, Oregon's covered bridge population steadily declined in the mid-twentieth century. By the 1960s, there were only 90 covered bridges left in the state. In 1979, the Covered Bridge Society of Oregon was formed to raise awareness and help preserve these historic structures. Cooperation from the Oregon State Highway Department and county governments has resulted in the rehabilitation and preservation of 45[3] covered bridges in Oregon.

Description

Neal Lane Bridge is a single-span kingpost truss covered bridge on timber crib piers with concrete footings. 42'-0" span. The roadway is 15'-6" wide between the curbs. The truss is 16'-6" high. There is a 17-foot approach span at the north end.

The truss is composed of 12"x12" diagonal members and 16"x16" hewn lower chords, connected at midspan by paired 1¾"-diameter rods. The rods pass through a tiebeam overhead and a transverse floor beam beneath the deck, where they are fastened above and

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[2] Dwight A. Smith, James B. Norman and Pieter T. Dykman, *Historic Highway Bridges of Oregon*, revised edition (Portland: Oregon Historical Society Press, 1989), p. 29.

[3] In 1995 Oregon had 45 authentic covered bridges, that is, housed, load-bearing, single-span wooden truss bridges. Four additional bridges are housed by have girders, slabs or steel trusses as their main support system.

below with a plate and nut assembly. There are 6"x7" diagonal sway braces bolted between the truss and overhead beam.

The deck system is comprised of three transverse floor beams, 7 lines of longitudinal stringers and transverse timber decking. The 10"x15" floor beams hang below the lower chords with U-shaped rods fastened with plates and nuts. The 4"x4" stringers rest on top of the floor beams 1"x3" timber decking is bolted to the stringers.

A 6"x6" longitudinal timber, seated on the overhead beam, supports the rafters. There are four 2"x4" transverse braces and seven 2"x3" collar ties. The gable roof is covered with corrugated sheet metal nailed to purlins on the rafters. It has two-foot eaves and exposed rafter tails. The bridge is covered with board and batten siding fastened to 3"x6" nailers. Shelter panels extend 8 feet inside the arched portals. There is a framed 3'-6"x16' on each side of the bridge. The bridge has a clearance limit of 12'-8" and is currently posted for 5 tons.

History

In 1852, gold miner Lazarus Wright settled at the site of present-day Myrtle Creek, where he built a saw and grist mill. Myrtle Creek had a post office by 1859, when it appears on J.A. Pownall's map of Oregon. In 1865, hotel owner John Hall platted the town of Myrtle Creek, which by that time was already an important stagecoach stop.[4] By the late 1880s, the community boasted two stores, a bank, a school, a grist mill, a planning mill, two blacksmith shops, a livery, a church, a hotel and a railroad depot.[5]

A crude road, approximating the alignment of Neal Lane existed by the 1870s,[6] and presumably there was a bridge here by that date, although no information has been found to document such a structure. In the 1920s, the county began improving its road system to accommodate automobile traffic[7] and residents petitioned the Douglas County Commissioners for a county road between South Myrtle Road and Day's Creek Road. The local newspaper stated: "*This is a short but important road, and will afford relief to a number of farmers who have had to travel to and from the main road through a loblolly of mud during the winter months and a chaos of bumps and ruts during the summer season.*"[8] Accordingly, Neal Lane was laid out as a county road in 1921.

In the spring of 1939, the present covered bridge was built to replace an old bridge at this site. Work was done by county road crews under the supervision of County Engineer Floyd C. Frear

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[4] Named for its abundance of native Myrtle trees, Myrtle Creek was incorporated as a city in 1903.
[5] A.G. Walling, *History of Southern Oregon Comprising Jackson, Josephine, Douglas, Curry and Coos Counties, Oregon* (Portland: A.G. Walling, 1884); Stephen Dow Beckham, Land of the Umpqua: A History of Douglas County, Oregon (Roseburg: Douglas County Commissioners, 1986), 131.
[6] *Myrtle Creek Mail*, 8 April 1921: 4.
[7] "Myrtle Creek, Oregon," *Myrtle Creek Mail*, 22 April 1921: 2.
[8] "Viewing Road East of Town," *Myrtle Creek Mail*, 22 April 1921: 1.

and Bridge Foreman Homer Gallup.[9] The new bridge was to be "a *covered structure with a 60-foot span,*" and was expected to take about one month to complete.[10] On July 6, 1939, the local newspaper reported that the bridge had been completed and was being painted white by the county crew.[11] According to local sources, the bridge cost Douglas County $1,000.[12]

Design

The kingpost truss is the oldest and most basic truss form which utilizes the stable geometry of the triangle to carry loads. The central post, the kingpost, acts in tension, pulling the center of the structure up where it would tend to deflect under loads. The kingpost transfers the load to the diagonal members and back to the abutments. The kingpost truss is generally used for short spans, of about 50 feet or less. According to the *World Guide to Covered Bridges*, there are approximately 95 kingpost truss covered bridges remaining in the United States.[13]

No documentation has been found concerning the use of the kingpost design for this particular structure, but Douglas County Commissioners Records indicate that the county was building kingpost, or "A-frame", bridges at least as early as 1913.[14] 1929 Oregon State Highway Commission plans for a similar 40-foot "A-frame" bridge, discovered in the Lane County Surveyor's Office, suggests that Neal Lane Bridge may also have been designed by the Oregon State Highway Commission.[15] If so, it is significant as the only surviving example of a once common type of timber bridge in the State of Oregon.

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[9] Floyd C. Frear (1888-1963), Douglas County Engineer from 1920 to 1957, was responsible for the construction of a number of covered bridges in Douglas County, including three that survive: Rochester (1933), Neal Lane (1939) and Cavitt Creek (1943).
[10] "New Bridge is Underway," *Myrtle Creek Mail*, 16 March 1939: 1.
[11] *Myrtle Creek Mail* 6 July 1939: 3.
[12] Oregon Inventory of Historic Properties Historic Resource Survey Form: "South Myrtle Creek Bridge," Douglas County, Oregon. Oregon Heritage Conservation Division, Salem, Oregon.
[13] National Society for the Preservation of Covered Bridges, *World Guide to Covered Bridges* database printout, April 2002.
[14] Douglas County Commissioners Records, Douglas County Courthouse, Roseburg, Oregon.
[15] Oregon State Highway Commission, "Standard 40'-0" "A" Frame, General Drawing, Drawing No. 3838, August 12, 1929."

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